



RESEARCH ARTICLE

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ADEQUABILITY OF CITOPATHOLOGICAL SAMPLES OF WOMEN ATTENDED IN A GYNECOLOGICAL NURSING SERVICE

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ABSTRACT

Introduction: Cervical cancer is a serious public health problem, with a high morbidity and mortality rate, being the third most frequent tumor, and the fourth cause of death in women due to cancer in Brazil. **Objective:** To evaluate the suitability of the cytopathological samples of women attending the gynecological nursing service. **Methods:** This is a descriptive, documental and retrospective study, data were collected using results of cytopathological exams dating from 2017. The information was analyzed and launched in a virtual questionnaire created for this purpose, which generated data that were allocated in tables. **Results:** 200 cytopathological examination results were analyzed, where the predominant age group was 40 to 54 years, with a percentage of 38.5%, with 100% satisfactory results, 99% of neoplastic cells absent, 99 cases of infections were identified, of these 60.7% of unknown causes and 198 (99%) were the number of exams without adequacy recorded in the book, besides that no conduct was adopted. **FINAL Considerations:** It is considered that the objective of the study was partially achieved, the team is assertive and have ability in the cytopathological collection process, obtaining satisfactory smears for analysis, but it was observed that there is little commitment in the adequate recording of the results in the cytopathological book.

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INTRODUCTION

Cervical cancer is a serious public health problem, which is related to high morbidity and mortality rates, being the most frequent non-cancerous cancer and the fourth leading cause of mortality in women in Brazil, is the fourth most common type of cancer among women, with worldwide incidence of approximately 530 thousand new cases per year and national of 16,370 per year. With an estimated 311,000 deaths in 2018. This disease accounts for 3.3% of all cancer-related deaths (INCA, 2018, VORA, GUPTA, 2019). The evolution of the disease occurs from the onset of precursor lesions caused by the persistent infection of the Human Virus - HPV papilloma of the oncogenic type. In addition, such cells can be diagnosed in the initial phase and cured in almost all of them (BARCELOS, 2017). Early detection of cervical cancer occurs through a method called Pap test, which consists of a simple

and low-cost conventional examination capable of detecting cell changes. While this is a widely used method for screening for this cancer, its susceptibility to collection errors and blade preparation may compromise its sensitivity and specificity. The start of cytopathological collection should be at 25 years of age for women who have had or have had sexual activity and should follow up to 64 years of age. The test should be performed every 3 years after 2 consecutive annual tests, with normal results (RIBEIRO, 2016, BRASIL, 2012, BRASIL, 2016). The Bethesda System (TBS), a nomenclature that has often been used to classify anomalies of the pavement and glandular epithelium, advocates that the report on the adequacy of the sample is a very important component to guarantee the quality of the smear. The suitability of the cytopathological samples is currently conceptualized through a Binary System that makes use of the expression "Satisfactory X Unsatisfactory", and the sample considered as satisfactory is one in which it is possible to visualize the slide in such a way as to allow a diagnostic conclusion, already unsatisfactory, it is a sample whose reading is impaired not by cellular sampling,

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but for technical reasons such as: presence of pyocytes, blood, smear dryness and external contaminants (UGHINI, 2015; AL-AWADHI, 2018). The significant presence of the squamocolumnar junction (JEC) is of paramount importance to guarantee the quality of the examination. The transformation zone is the region of the cervix where the columnar epithelium has been or is being replaced by squamous metaplastic epithelium, and is a key location for sample collection. Thus, the presence of components of the transformation zone is an important measure of adequate sampling and its absence should be considered a poor sampling indicator (DALLAZEM *et al.*, 2018). For these reasons, it is of great significance a study that evaluates the quality of the cytopathological samples, since it is an innovative theme in the region of study, which will contribute to the performance and knowledge of the professionals about the quality of the biological samples collected, besides benefit the female population, which will have access to a more reliable result, favoring the decision making and the subsequent implementation of an adequate therapeutic conduct. In addition, increasing the efficacy of sample evaluation will contribute to both the early detection of cervical cancer and the elimination of false negative results. Thus, in order to contribute to the improvement of the early detection of cervical cancer, the following objective was outlined: To evaluate the suitability of cervical cytopathological samples collected in a Basic Health Unit of the city of Vitória da Conquista in the year of 2017.

MATERIALS AND METHODS

This is a descriptive, documental, retrospective study with a quantitative approach, where the researcher did not interfere, since the researcher only observed, investigated, ordered and recorded the collected data, using a form for such end. The quantitative approach has a measurable character, also employing documentary research analysis that was based on the interpretation of records that were used as information source according to the research objective (CAFÉ; BARROS, 2018). The data were collected through the information contained in the unit's record book, dated 2017, which recorded the findings of cytopathological examination results, with the help of an online questionnaire created in the KoBoToolbox program. All data were considered, considering the chronological interval mentioned above. This questionnaire contained 9 (nine) guiding questions including (identification number, age, date of collection, suitability of the sample, presence of atypical cells in the sample, result of the examination, conduct adopted, suitability of the sample), which researcher during data collection. The data were collected during the month of April and then the collection, were organized and stored in a database, being evaluated the frequencies and the statistical percentages. The ethical aspects of the research involving human beings were considered, in accordance with Resolution 466/12, so the research was previously authorized by the Research Ethics Committee of the Faculdade Independente do Nordeste - FAINOR, according to the opinion number 3,167. 321.

RESULTS

During the collection period, 200 of the cytopathological tests performed in the year 2017 were analyzed. The samples were characterized based on age, sample adequacy, atypical cell representativity, outcome of the examination and conduct

adopted by health professionals. Regarding the age group prevalent in cytopathological collections, it can be observed that of the 200 test results analyzed, the highest index was found among the female population aged 40 to 54, 77 (38.5%). It is shown below in Table 1. Among the 200 cytopathological examination results analyzed, the suitability of the samples should be described in the unit's logbook, it was observed that 100% of the samples were satisfactory, but 198 (99%) of the suitability of the sample had not been recorded, according. In order to assess adequacy, it was based on the Manual of cytopathological reports, which considers as satisfactory the smear, which is possible to clearly visualize the sample contained in the slide during the preanalysis, being able to proceed to the cytopathological analysis phase, where it is possible to identify the perimeters of normality or not of the sample, thus providing a diagnostic conclusion (BRASIL, 2012). It was evidenced that the great majority, 198 (99%) of the evaluated results, did not present atypical cells, that is, the majority of the samples were negative for neoplasia. As shown in Table 2, of the 200 test results analyzed, 101 (50.5%) were without infection. The other 99 (49.5%) had an infectious process. Among the samples with infections, follows the distribution of the microorganisms found in table 3. Concerning the behavior adopted by the professionals in face of the alterations found, only in 2 samples there was some referral by the professionals, in which in a sample (with inflammation accentuated by gardnerella and mobiluncus) there was a referral to the referral center for sexually transmitted infection - IST and in the other one (atrophy, with presence of inflammation) there was a request for return to carry out a new collection.

DISCUSSION

The e pap smear or cytopathological examination is a screening strategy advocated by the Ministry of Health (MS), considered as an efficient examination for the early detection of cervical cancer. In Brazil, it has obtained positive results with the reduction of the mortality rate for this type of cancer (BRAZIL, 2016). In the present study, the predominant age group of the women who underwent the exam was 40 to 54 years of age, corroborating with a study by Santos *et al.* (2019), which demonstrated that the age group that most performed the exam in the period studied was over 40 years, these add that the female population conducts the examination frequently for the maintenance of health and well being, since the serious lesions become more frequent at this age. It should be emphasized that this method of screening should be offered primarily to women aged 25 to 64 years, since studies indicate that serious injuries are more frequent in this age range due to the style and living conditions of the female population exposed, making them more vulnerable (INCA, 2016). Considering the evaluation of the adequacy of the 200 analyzed records, it was observed that 100% of the collected samples were satisfactory, a result very close to the study by França *et al.* (2016), which obtained a percentage of 97.4% positivity in its analysis, with only 2.6% of samples unsatisfactory, a low percentage that falls within the standard established by the Pan American Health Organization (PAHO), which defines as a minimum 5% standard. These authors also present in their study that the Brazilian public health system since 2010 has presented low indices of unsatisfactory cytopathological samples, which demonstrates how apt health professionals are for perform in the process of collecting the pap smear. According to the studies of

Jakobczynski *et al.* (2018), these low indexes of unsatisfactoriness occur through the frequent development of studies aimed at improving the tracking process, in which the authors provide training and training to obtain comparative data and enrich the study, benefiting also the professionals responsible for the collection, because although it seems easy to practice the exam is not a simple procedure, it requires scientific knowledge and skill. Hosono *et al.* (2018) in their studies emphasize that the adequacy analysis of the sample is a very important process that will guarantee the reliability of the result. Since an unsatisfactory sample may cause misinterpretation, which will directly implicate the test result, and therefore the therapy employed.

Table 1. Characterization of the age group of the female population that performed the Papanicolau in the field unit in the year 2017

AGE GROUP	Fa	F%
25 to 29 years	18	9%
30 to 34 years	22	11%
35 to 39 years	35	17,5%
40 to 54 years	77	38,5%
Above 54 years	48	24%

Source: Research Data

Table 2. Presence of infection in cytopathological samples in the field unit in the year 2017

INFECTION	Fa	F%
Presence of Infection	99	49,5%
Absence of infection	101	50,5%

Source: Research Data

Table 3. Distribution of microorganisms in the cytopathological samples with infectious process in the field unit in the year 2017

MICROORGANISMS	Fa	F%
Gardnerella	19	19,0%
Trichomonas vaginalis	2	2%
Infection with unknown skin	60	60,7%
Cândida sp.	18	18,1%

Source: Research Data

Moreover, in order to consider that the sample is satisfactory, as in the present study it was pointed out, the smear does not necessarily contain the three tissues of the columnar escutcheon junction - JEC. From the moment it is possible to visualize the slide in the pre-analysis, it can be considered satisfactory, to the point of generating a diagnosis (CHAN, 2017; BRASIL, 2012). Several studies aimed at informing the female population about the importance of the test demonstrate that abnormal cells, also called atypical cells, when identified early, can be treated in the early stages, as well as in the advanced stages, increasing the chance of regression of the lesion (SANTOS *et al.*, 2019). Thus, it was identified in this study that two (1%) of the studied samples presented atypical cells, one classified as atypical squamous of indeterminate meaning (ASC-US), that is, low-grade intrapetelial lesion (LSIL) contained an atypical squamous cell, and could not rule out high-grade lesions (ASC-H). According to Rosendo *et al.* (2018), women with samples classified as ASC-US, although not serious, are at increased risk for lesions when compared to samples that do not show abnormality. detected in the pap smear, should be referred for high complexity service, for colposcopy and biopsy of abnormal areas. Nevertheless, even with the low index of neoplastic cells identified in this study, it is noted that the risk for the occurrence of precussive lesions in

the study population remains, considering the index of inflammation in the exam results (MACHADO, 2018). Other aspects mentioned in this research were presented in the results of the examinations and the behaviors adopted by the professionals before each diagnosis, where it was possible to analyze that of the 200 registered samples, in 99 (49.5%) infections were identified, and of these 60 (60.7%) were by unknown etiological agents. A relevant data demonstrating that the population studied is vulnerable to the occurrence of precancerous lesion over time if STIs persist because they, when not properly treated, cause injuries to the vaginal wall as well as to the uterine cervix. The human organism has the physiological action to trigger compensatory mechanisms such as hyperplasia to restore the amount of cells destroyed during the infection phase, but in the failure of this process of hyperplasia happens in an uncontrolled way, that is, the cells proliferate in which may exert mutations in its DNA and precede uterine cervix cancer (ROSS, 2017; OLIVEIRA *et al.*, 2018).

According to Sperhackle *et al.* (2018) since 1996 that the Brazilian Department of STIs has been carrying out periodic studies, collecting data pertinent to the sexual behavior of the population and the prevalence of Human Immunodeficiency Virus-HIV. In the result of the study, the authors correlate the prevalence of HIV and other STIs with the sexual behavior of the population. The early initiation of sexual life, the multiplicity of partners and the use of preservative have contributed to increase the rates of these diverse infections. According to these authors, gonorrhea, candidiasis and trichomoniasis, besides causing unpleasant symptoms such as discharge, pruritus and low immunity, are closely related to cervical neoplasia, since all of them are also directly associated with the above mentioned risk behaviors. However, the absence of book records of the adopted behaviors was evidenced, since of the 200 consultations carried out 198 (99%) were not properly registered, which may compromise the continuity of the Nursing actions. In view of the findings in the examination results, what is expected by managers in the area of health, is that professionals adopt resolute behaviors, be they preventive guidelines in the absence of non-compliance, as well as the use of the reference / counter-referral service for safe and adequate routing in order to meet the specificity of the moment. The MS have manuals, protocols and guidelines and training that supports the Nurse, he ones to be done according to the recommendations. With the implementation of many health policies to improve the quality of early screening, this will only be effective if there is full collaboration of those involved, and this feedback is only possible if the three levels of government are addressed through appropriate records and updating of the SISCOLO (Cervical Cancer Information System). This study has a caveat regarding the records of the cytopathological results, in which, in 198 (99%), they were inadequately filled in the case unit. Based on Administrative Rule no. 3.388, dated December 30, 2013, Art. 5, paragraph two, it is the responsibility of the Basic Attention to receive and register the reports of the Laboratories, in addition to organizing the flows of delivery of results to the users according to with the presence or absence of changes, accompanying the percentage of classification of the suitability of the samples, and may generate indicators (BRAZIL, 2013). In the last consolidation issued by SICOLO, the municipality in which the present study was developed presented the following percentages for each parameter evaluated: A total of 5574 (100%) of the data collected about the entire process of

screening the female population, (0, 0%) was the high / cure percentage, and 5 (0.09%) were the follow-up follow-up. death, and 7 (0.13%) correspond to cases of refusal / abandonment. Given these data, the need and importance of the registry is justified because it is through them that it becomes possible to trace the epidemiological profile of a region (SICOLO, 2018). The commitment to the routine of recording the results in a complete way in the unit book compromises the actions in the service, since this registry is of fundamental importance, for analysis of erroneous diagnoses and even clinical follow-up of the patients, being able to generate indicators that when presented for the three spheres of government will attract more effective intervention measures (REIS et al., 2015).

Final Considerations

The adequacy of the cytopathological samples of cervical cancer is an essential criterion for the quality analysis of the cytopathological samples collected in clinical practice, closely linked to the assistance developed by the Nurse in the unit. In view of the presented results, it is concluded that the objective of the study was partially achieved, the team is assertive and have skill in the process of cytopathological collection in order to obtain satisfactory smears for analysis, but it was observed that there is little commitment to the complete record of the results in the book, which compromises the follow-up of the user regarding the clinical findings obtained through the collection. In the absence of such registration, municipal management is recommended to include Permanent Education themes, related to the importance of registration, for professionals working in the Basic Health Unit -UBS, in order to increase quality at all levels of care. Due to the fact that it is a topic that has not been adequately addressed, new studies are needed to show the profile of other UBS and its real problems, aiming at reducing the disease index, since its prevention is based on reliable collection, adequate clinical evaluation, interpretation of results and knowledge about their importance. In order to awaken in health professionals the desire to seek improvement in cervical cancer care, since they are considered as the main actors of the process and have adequate tools that can contribute to minimize the aggravations to the vulnerable population.

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